

**IN THE CLAIMS**

Please amend the claims as follows:

1. (AMENDED) A computer-implemented method, comprising:  
executing a client module configured to simulate behavior of an electronic system;  
using a remote procedure call (RPC) to transfer process control to a server module that models behavior of a component of the electronic system;  
controllably advancing simulation time; and  
returning process control to the client module after execution of the server module.
2. (Original) The method of claim 1, wherein the client module is a Verilog/PLI module.
3. (Original) The method of claim 1, wherein the server module is a System C module.
4. (Original) The method of claim 1, wherein the RPC uses the TCP protocol as a transport layer protocol.
5. (Original) The method of claim 1, wherein the RPC uses the UDP protocol as a transport layer protocol.
6. (Original) The method of claim 1, further comprising mapping a plurality of input ports of the server module to a plurality of signals.
7. (Original) The method of claim 1, further comprising suspending operation of the server module.
8. (Original) The method of claim 1, further comprising returning a return value to the client module after execution of the server module, the return value representing a plurality of output signals.

9. (Original) The method of claim 1, further comprising advancing simulation time by one cycle of a clock signal.

10. (Original) The method of claim 9, wherein the server module is configured to be sensitive to a positive edge of the clock signal.

11. (AMENDED) A computer-readable medium having computer-executable instructions for:

executing a client module configured to simulate behavior of an electronic system;  
using a remote procedure call (RPC) to transfer process control to a server module that models behavior of a component of the electronic system;  
controllably advancing simulation time; and  
returning process control to the client module after execution of the server module.

12. (Original) The computer-readable medium of claim 11, wherein the client module is a Verilog/PLI module.

13. (Original) The computer-readable medium of claim 11, wherein the server module is a SystemC module.

14. (Original) The computer-readable medium of claim 11, wherein the RPC uses the TCP protocol as a transport layer protocol.

15. (Original) The computer-readable medium of claim 11, wherein the RPC uses the UDP protocol as a transport layer protocol.

16. (Original) The computer-readable medium of claim 11, having further computer-executable instructions for mapping a plurality of input ports of the server module to a plurality of signals.

17. (Original) The computer-readable medium of claim 11, having further computer-executable instructions for suspending operation of the server module.

18. (Original) The computer-readable medium of claim 11, having further computer-executable instructions for returning a return value to the client module after execution of the server module, the return value representing a plurality of output signals.

19. (Original) The computer readable medium of claim 19, having further computer-executable instructions for advancing simulation time by one cycle of a clock signal.

20. (Original) The computer-readable medium of claim 19, wherein the server module is configured to be sensitive to a positive edge of the clock signal.

21. (Original) A computer-implemented method, comprising:

- executing a Verilog/PLI module configured to simulate behavior of an electronic system;
- using a remote procedure call (RPC) to transfer process control to a SystemC module that models behavior of a component of the electronic system;
- suspending operation of the SystemC module;
- advancing simulation time by one cycle of a clock signal; and
- returning a return value to the Verilog/PLI module after execution of the SystemC module, the return value representing a plurality of output signals.

22. (Original) A computer-readable medium having computer-executable instructions for:

- executing a Verilog/PLI module configured to simulate behavior of an electronic system;
- using a remote procedure call (RPC) to transfer process control to a SystemC module that models behavior of a component of the electronic system;
- suspending operation of the SystemC module;
- advancing simulation time by one cycle of a clock signal; and
- returning a return value to the Verilog/PLI module after execution of the SystemC module, the return value representing a plurality of output signals.

23. (Original) A computer-implemented method, comprising:
- executing a Verilog/PLI module configured to simulate behavior of an electronic system;
  - using a remote procedure call (RPC) to transfer process control to a SystemC module that models behavior of a component of the electronic system, the System C module having a plurality of global signals mapped to at least one of an input port of the System C module and an output port of the System C module;
  - suspending operation of the System C module;
  - advancing simulation time by one cycle of a clock signal having a 50% duty cycle; and
  - returning a pointer associated with a return value to the Verilog/PLI module after execution of the System C module, the return value representing a plurality of output signals.
24. (Original) The method of claim 23, further comprising generating the System C module by modifying a model created using the C programming language.
25. (Original) The method of claim 23, further comprising implementing the RPC at least in part in the Verilog/PLI module.
26. (Original) The method of claim 23, further comprising implementing the RPC at least in part in the System C module.
27. (Original) A computer-readable medium having computer-executable instructions for:
- executing a Verilog/PLI module configured to simulate behavior of an electronic system;
  - using a remote procedure call (RPC) to transfer process control to a System C module that models behavior of a component of the electronic system, the System C module having a plurality of global signals mapped to at least one of an input port of the System C module and an output port of the System C module;
  - suspending operation of the System C module;
  - advancing simulation time by one cycle of a clock signal having a 50% duty cycle; and
  - returning a pointer associated with a return value to the Verilog/PLI module after execution of the System C module, the return value representing a plurality of output signals.

28. (Original) The computer-readable medium of claim 27, having further computer-executable instructions for generating the System C module by modifying a model created using the C programming language.

29. (Original) The computer-readable medium of claim 27, having further computer-executable instructions for implementing the RPC at least in part in the Verilog/PLI module.

30. (Original) The computer-readable medium of claim 27, having further computer-executable instructions for implementing the RPC at least in part in the System C module.